

PATENT SPECIFICATION

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(54) LUMBAR SUPPORT MEANS

(71) I, THE SECRETARY OF STATE
 FOR DEFENCE, London, do hereby declare
 the invention, for which I pray that a patent
 may be granted to me, and the method by
 which it is to be performed, to be par-
 ticularly described in and by the following
 statements:—

This invention relates to lumbar support
 means.

The majority of seats afford inadequate
 support at the lower lumbar region of a seat
 occupant. It is difficult to provide
 universally adequate support as the location
 and extent of the lumbar curvature vary
 from person to person.

Medical evidence shows that adequate
 support of a seated occupant at the lower
 lumbar region reduces the stresses which
 would otherwise be present on the vertebral
 supporting tissues and that excessive
 support may result in hyperextension of the
 lower spine which can cause permanent
 structural damage.

It follows that any support at the lumbar
 region of a seated person which provides
 only a fixed, arbitrary amount of support is
 likely to prove inadequate for the majority
 of users and the persistent use of such a
 support might prove harmful.

It is an object of the present invention to
 provide improved lumbar support means.

Lumbar support means according to
 the present invention for affording support
 at the lumbar region of a seated user and for
 location between a user's lumbar region and
 a support such as the back of a seat, is shaped
 to provide both support from the rear and
 lateral support to the user and is adjustable
 to vary both the thickness of the support
 means in the rearwards supporting direction
 and the degree of lateral support.

In a preferred embodiment lumbar
 support means comprises an upholstered
 pad having a base portion which is adjust-
 able for thickness and conjoins two end
 wing portions which latter are supported for
 angular movement with respect to the base
 portion about their conjoined regions and

are adjustable to change their angular
 setting with respect to the base portion to
 vary the degree of lateral support.

A single adjustment may vary the ef-
 fective thickness of the base portion and
 adjust the angular setting of the end wing
 portions.

An embodiment of the invention is
 illustrated by way of example in the
 diagrammatic drawings accompanying the
 provisional specification of which:

Figure 1 is a side view,

Figure 2 is an end view, and

Figure 3 is a pictorial view.

As shown lumbar support means com-
 prises essentially a base portion 11 and two
 wing portions 12, 13, of generally U shape.
 The base portion 11 has a base plate 14 and
 a stiffening plate 15 which is bowed in trans-
 verse cross-section and is rivetted at 16 to
 the plate 14. The wing portions 12, 13 are
 flanged at their inner and outer edges 17, 17
 and 18, 18 and are supported by hinges as at
 19, 20 on the plate 14. The wing portion 12
 carries a housing 21 enclosing a sliding
 block 22 which is in threaded engagement
 with a control rod 23 having a knurled
 adjustment knob 24. A length of webbing
 25 is secured to the wing portion 13 at 26
 and extends beneath the stiffening plate 15,
 passing through slots 27, 28 in the plate 15
 and is secured to the block 22. A further
 length of webbing 29 is secured to the plate
 15 at 30 and extends to and is secured to the
 block 22. Three lengths of webbing 31 are
 secured at their opposite ends to the wing
 portions 12, 13 and extend beneath two
 lengths of elasticised webbing 32 which are
 rivetted to the base plate 14 and extend
 transversely across it.

The webbing lengths 31 and 32 are under
 tension and are covered with a facing layer
 of foam rubber backed fabric which for the
 sake of clarity is not shown.

Adjustment of the knob 24 in one sense to
 move the block 22 towards the base plate 14
 will result in the support taking up the shape
 shown in dotted lines at Figure 1 as the

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tension in the webbing lengths 31, 32 takes up the slack from the webbing lengths 25 and 29. Similarly, adjustment of the knob 24 in the other sense will tighten the webbing lengths 25 and 29 and move the wings 12 and 13 from the position shown in dotted lines to that shown in full lines at Figure 1.

It will be noted that the effective thickness of the support means can thus be varied simultaneously with a variation in lateral support as afforded by the wing portions 12 and 13.

Support means as disclosed may be left in a vehicle seat and adjusted by different seat occupants or may be transferred from one seat to another and adjusted as required.

Straps or other fastening means may be provided for securing the support means to a seat.

WHAT I CLAIM IS:—

1. A lumbar support means for affording support at the lumbar region of a seated user, the means being shaped to provide both support from the rear and lateral support to the user and adjustable to vary both the thickness of the support means in

the rearwards supporting direction and the degree of lateral support.

2. Lumbar support means as claimed in claim 1 and comprising an upholstered pad having a base portion which is adjustable for thickness, the base portion conjoining two end wing portions which latter are supported for angular movement with respect to the base portion and about their conjoined regions, and are adjustable to change their angular setting with respect to the base portion to vary the degree of lateral support.

3. Lumbar support means as claimed in claim 2, and having a single adjustment means for varying at the same time the angular setting of both end wing portions and the thickness of the base portion.

4. Lumbar support means as claimed in any one of claims 1 to 3 and having fastening means for securing the support means to a seat.

5. Lumbar support means substantially as hereinbefore described with reference to the drawings accompanying the provisional specification.

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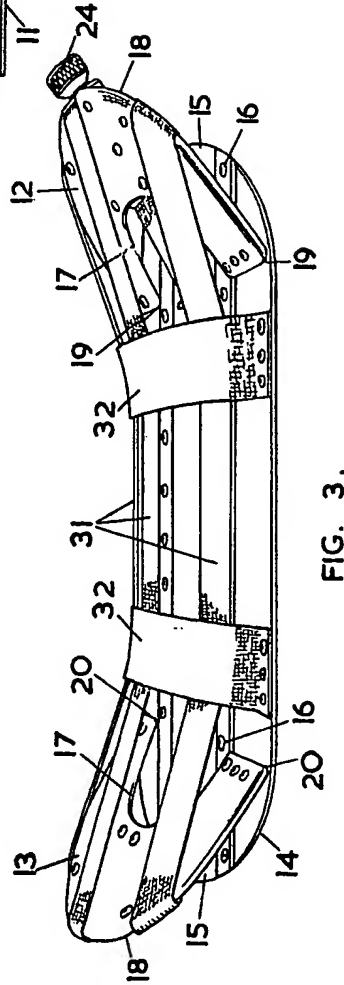
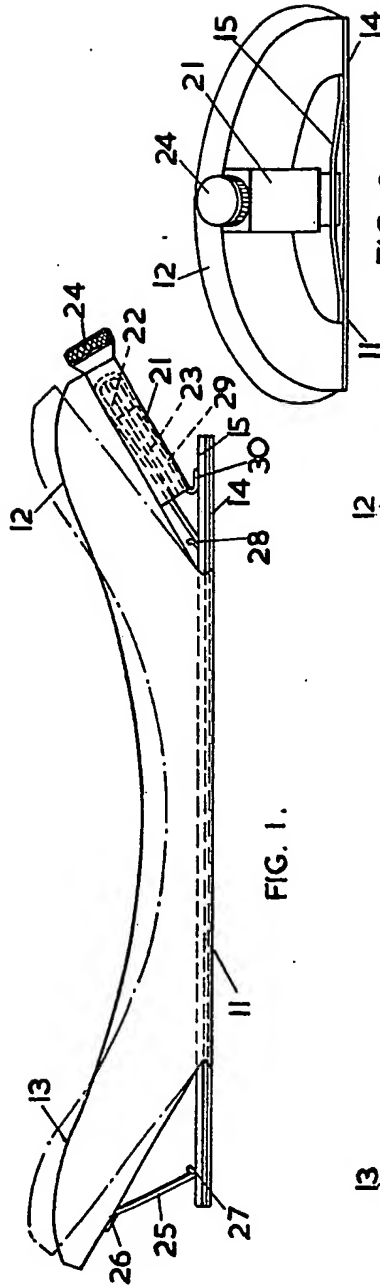


FIG. 2.

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